

- 1. A method for measuring binding activity of molecules to steroid hormone receptors, comprising:
 - a) mixing a fluorescence-emitting compound that binds to the steroid hormone receptors at a first domain and a fluorescence-labeled nucleic acid that binds to the steroid hormone receptors at a second domain in a solution containing the steroid hormone receptors;
 - b) measuring the fluorescence polarization of each fluorescence emission from the solution from step a);
 - c) incubating the solution of step a) with at least one molecule that may compete for interaction with at least one domain;
 - d) measuring the fluorescence polarization of each fluorescence emission of the solution during step c); and,
 - e) comparing the fluorescence polarization measurements of step b) with step d) to quantify any interaction.
- 2. The method of claim 1 wherein the steroid hormone receptors are purified.
- 3. The method of claim 2 wherein the purified steroid hormone receptors comprises recombinant steroid hormone receptors.
- 4. The method of claim 2 wherein the quantitation comparison of step e) is of sufficient magnitude to be suitable for use with a screening assay.
- 5. The method of claim 4 wherein the screening assay is performed on a multi-well plate.
- 6. The method of claim 2 wherein the fluorescence-emitting compound comprises a hormone that inherently emits fluorescence.
- Sur!
- 7. The method of claim 3 wherein the steroid hormone receptors comprises estrogen receptor.



- 8. The method of claim 2 wherein the nucleic acid comprises a deoxyribonucleic acid.
- 9. A kit utilizing the method of claim 1 for identifying natural and non-natural molecules which bind to human steroid hormone receptors, for use in treating related diseases, comprising:
 - a) instructions for utilizing fluorescence polarization to identify the molecules;
 - b) a receptacle containing human steroid hormone receptors; and,
 - a receptacle containing fluorescence-emitting hormone which binds human steroid hormone receptors
- 10. The kit of claim 9 wherein the human steroid hormone receptors are purified.
- 11. The kit of claim 10 wherein the human steroid hormone receptors are recombinant.
- 12. The kit of claim 1/1 further comprising a receptacle containing a fluorescence-labeled nucleic acid.

add ar